STAR OPM Schema

Pablo P Yepes

Rice University

Object Protocol Model

- Why:
  - allows an OO approach with our present DB at RHIC (Oracle).
  - Attractive Web tools
- Where are we?
  - Using the tool on the OPM group workstation
  - Some work done to install it on RHIC cluster. At the moment waiting for an upgrade to be able to access Oracle from C++.
  - A data schema defined and implemented.

OPM

- Plenty of documentation.
- Lots of help from E. Szeto
- Sometimes I got confused with different scripts. Different ways of doing the same operations.
- Some troubles with Oracle reserved words.
- I have not got to the point where I can get the DB on the Web by myself.

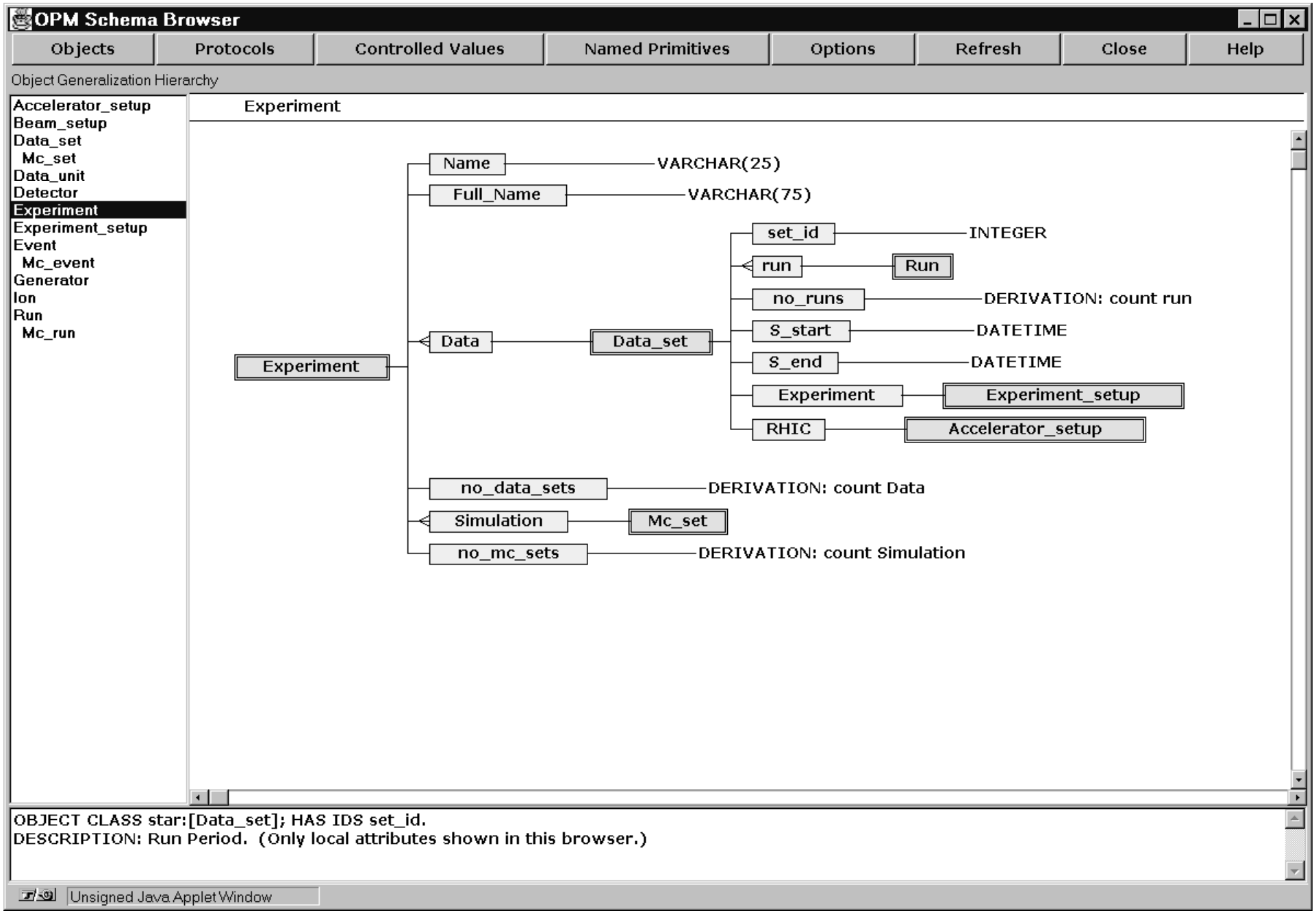
Schema Definition

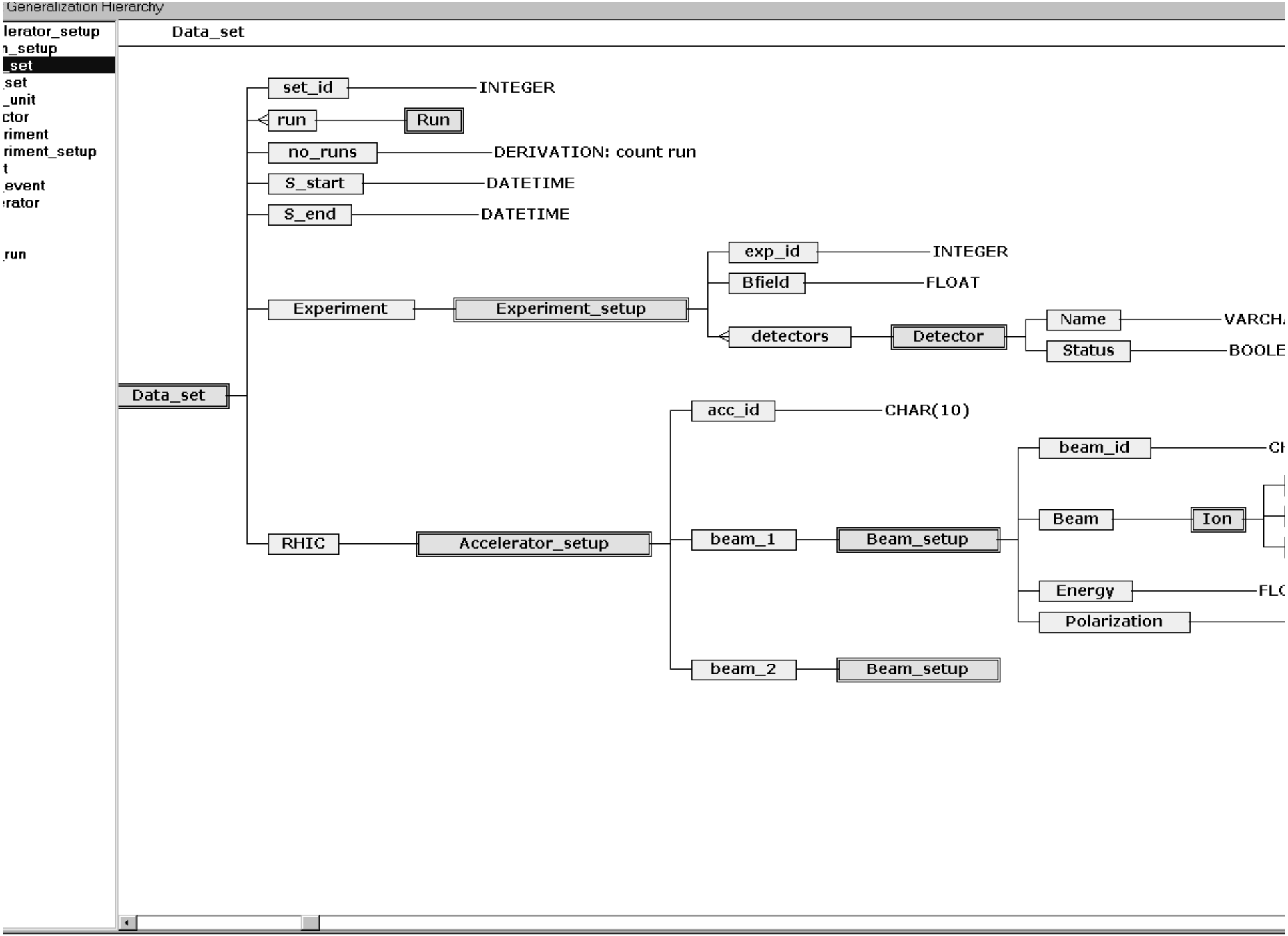
- Schema editor available
- However it is faster to define the schema with an ascii file
- Examples of schema header and two objects.

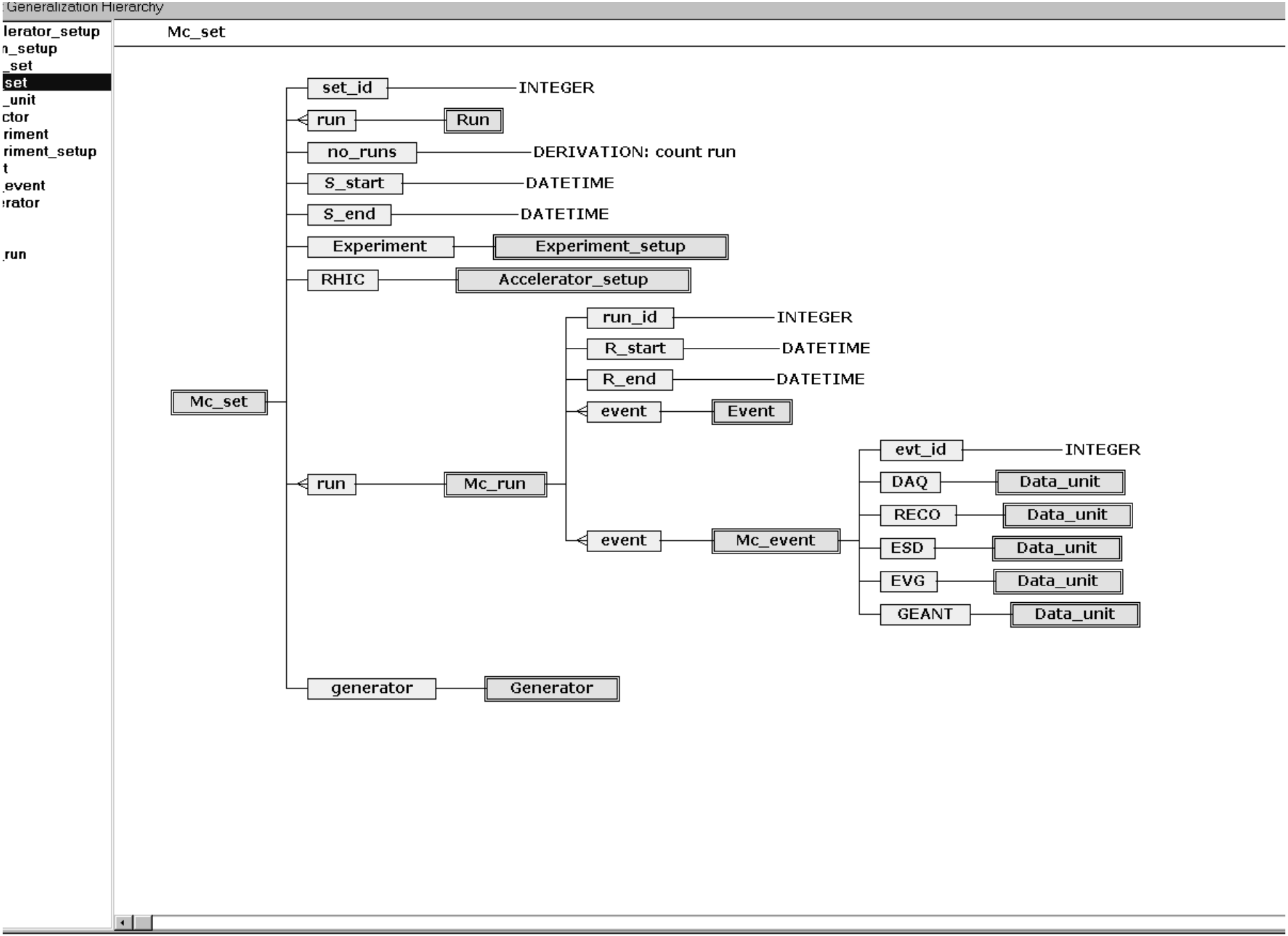
```
SCHEMA STAR
  DESCRIPTION: "First to define STAR hirarchical
     database "

OBJECT CLASS Accelerator_setup
  DESCRIPTION: "Accelerator Setup "
  ID        : acc_id
  ATTRIBUTE acc_id       : [1,1] CHAR(10)
  ATTRIBUTE beam_1       : [1,1] Beam_setup
  ATTRIBUTE beam_2       : [1,1] Beam_setup

OBJECT CLASS Beam_setup
  DESCRIPTION: "Beam Setup "
  ID        : beam_id
  ATTRIBUTE beam_id     : [1,1] CHAR(10)
  ATTRIBUTE Beam        : [1,1] Ion
  ATTRIBUTE Energy      : [1,1] FLOAT
  ATTRIBUTE Polarization : [1,1] FLOAT
```


OPM Schema Browser
Objects
Protocols
Controlled Values
Named Primitives
Options
Refresh
Close
Help
Object Generalization Hierarchy
Accelerator_setup
Beam_setup
Data_set
Mc_set
Data_unit
Detector
Experiment
Experiment_setup
Event
Mc_event
Generator
Ion
Run
Mc_run
Experiment
Name
VARCHAR(25)
Full_Name
VARCHAR(75)
set_id
INTEGER
run
Run
no_runs
DERIVATION: count run
S_start
DATETIME
S_end
DATETIME
Experiment
Experiment_setup
RHIC
Accelerator_setup
Data
Data_set
Experiment
no_data_sets
DERIVATION: count Data
Simulation
Mc_set
no_mc_sets
DERIVATION: count Simulation
OBJECT CLASS star:[Data_set]; HAS IDS set_id.
DESCRIPTION: Run Period. (Only local attributes shown in this browser.)
Unsigned Java Applet Window


Generalization Hierarchy
lerator_setup
n_setup
_set
_set
_unit
ctor
riment
riment_setup
t
_event
rator
_run
Data_set
set_id
INTEGER
run
Run
no_runs
DERIVATION: count run
S_start
DATETIME
S_end
DATETIME
exp_id
INTEGER
Bfield
FLOAT
Experiment
Experiment_setup
detectors
Detector
Name
VARCH
Status
BOOLE
Data_set
acc_id
CHAR(10)
beam_id
CH
Beam
Ion
RHIC
Accelerator_setup
beam_1
Beam_setup
Energy
FLO
Polarization
beam_2
Beam_setup
ECT CLASS star:[Ion]; HAS IDS Name.
CRIPTION: Beam Particle. (Only local attributes shown in this browser.)



ECT CLASS star:[Mc_event]; ISA Event. (Inherited attributes also shown in this browser.)